



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/563,738

07/10/2006

Vincent Lauer

H45-003-01-US

1960

54092 7590 08/05/2008
NORTH OAKS PATENT AGENCY
45 ISLAND ROAD
NORTH OAKS, MN 55127

EXAMINER

YAM, STEPHEN K

ART UNIT

PAPER NUMBER

2878

MAIL DATE

DELIVERY MODE

08/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,738	Applicant(s) LAUER, VINCENT	
	Examiner STEPHEN YAM	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 23 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 5, 7-11, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/23/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (Claims 1-12 and 23-38) in the reply filed on April 25, 2008 is acknowledged.

Specification

2. The disclosure is objected to because of the following informalities:

In Page 1, "5,545,265" should be corrected to "6,545,265".

Appropriate correction is required.

Claim Objections

3. Claims 1, 2, 4, 6, 7, 9-11, and 23 are objected to because of the following informalities:

In Claims 1, 4, 6, 9-11, and 23, all instances of "it" lack antecedent basis.

In Claims 1 and 23, "and" should be placed before the final step (j).

In Claim 2, line 2, "determine" should be replaced with "determines".

In Claim 7, line 4, "the first" should be replaced with "the first plate".
4. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2878

6. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, it is unclear whether the claimed invention contains a single sensor for detecting both the first and second images or whether the claimed invention contains a second sensor to detect the second image, as there is insufficient antecedent basis for the sensor detecting the second image.

Regarding Claim 1, it is unclear whether "the means for forming of an image of the illumination point" and "the means for forming an image of said band" are a single component or are two separate components, as the specification appears to indicate that a single component performs both functions and there is insufficient antecedent basis for clarity of this issue.

Claims 2-12 are indefinite by virtue of their dependency on an indefinite claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 4, 6, 12, 23, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. US 6,341,035 in view of Katou JP 09-309402.

Regarding Claims 1 and 23, Miura et al. teach (see Fig. 1) an imaging device comprising:

a) a means (1) for illuminating at least one illumination point on an observed zone of an

Art Unit: 2878

observed plane (6) by means of an illumination light beam (see Fig. 1), b) a means (4) for selecting, in the light coming from the observed plane, the light coming from said illumination point (see Col. 5, lines 20-33), c) a means (8) for forming an image of said illumination point from the selected light coming from said illumination point (see Fig. 1), e) a sensor (9) which detects a first image of the observed zone, characterized in that: f) the device comprises a means for selecting, in the light coming from the observed plane, the light coming from a band surrounding said illumination point (see Col. 2, lines 40-50), g) the device comprises the means for forming an image of said band from the selected light coming from said band, i) the device comprises the sensor which detects the second image (see Col. 6, lines 32-47), and j) the device comprises a means (21) for combining the first and second images of the observed zone to form a third image of the observed zone (see Col. 6, lines 32-47). Miura et al. do not teach a scanning system for displacing said illumination point on the observed zone and for simultaneously displacing the image of said illumination point, in order to scan an observed zone and form a first image of the observed zone. Katou et al. teach a similar detection device with a scanning system 43) for simultaneously displacing an illumination point and a reflected image (see Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the scanning system of Katou, in the device of Miura et al., to expand the scanning region to successfully image a larger specimen or surface.

Regarding Claim 4, Miura et al. in view of Katou et al. teach the device in Claim 1. Miura et al. do not teach the device comprising a plurality of illumination points and a plurality of bands, each of said bands surrounding a corresponding illumination point. It is well known in the art to provide multiple imaging points in an examination system, to reduce the time period

Art Unit: 2878

required for a full examination by performing multiple simultaneous tasks. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the device comprising a plurality of illumination points and a plurality of bands, each of said bands surrounding a corresponding illumination point, in the device of Miura et al. in view of Katou et al., since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (1977).

Regarding Claims 6 and 26, Miura et al. teach a single illumination point, and in that the means for illuminating the illumination point comprises a lens (2/5) which focuses a light beam on the illumination point (see Fig. 1). Miura et al. do not teach the light beam as a laser beam. It is well known in the art to provide a laser as a light source, for improved light intensity and optimal light collimation. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the light beam as a laser beam, in the device of Miura et al. in view of Katou et al., to improve the light output for a more clear and illuminated image.

Regarding Claim 12, Miura et al. teach the selection means are fixed masks (see Miura et al., Fig. 2-3) and in that the scanning system consists of a moveable mirror (see Katou et al., Fig. 2).

Regarding Claims 27 and 28, Miura et al. in view of Katou et al. teach the device and method in Claims 1 and 23, according to the appropriate paragraph above. Miura et al. do not teach the selecting as selecting light having a different wavelength than the wavelength of the light used for illuminating the observed plane, to generate a fluorescent image. It is well known in the art to configure a microscope as a fluorescence-detecting examination system, and that a filter is commonly placed in front of a imaging device in such a system to filter out wavelengths

Art Unit: 2878

outside of the desired fluorescence wavelength detection. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the selecting as selecting light having a different wavelength than the wavelength of the light used for illuminating the observed plane, to generate a fluorescent image, in the device and method of Miura et al. in view of Katou et al., to provide effective detection of multiple properties of the specimen and its properties through commonly known fluorescence examination.

Allowable Subject Matter

9. Claims 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 2, 3, 5, and 7-11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claims 2 and 24, the invention as claimed, specifically in combination with said means or step for combining said first and second images determine the difference between the first image modified by a first multiplier coefficient and the second image modified by a second multiplier coefficient, is not disclosed or made obvious by the prior art of record.

Regarding Claims 3 and 25, the invention as claimed, specifically in combination with said band is a ring that is concentric to said illumination points, is not disclosed or made obvious by the prior art of record.

Regarding Claim 5, the invention as claimed, specifically in combination with the means for illuminating the plurality of illumination points comprise an array of microlenses which separate a laser beam into a plurality of subbeams, each focused on one illumination point, is not disclosed or made obvious by the prior art of record.

Regarding Claim 7, the invention as claimed, specifically in combination with the means for selecting the light consisting of the superposition of a first opaque plate comprising at least one transparent disk and of a second opaque plate comprising at least one transparent disk and at least one transparent ring, as well as a means for moving the second plate in translation with respect to the first, so as to bring the disk of the second plate opposite the disk of the first plate during acquisition of the first image and so as to then bring the ring of the second plate opposite the disk of the first plate during acquisition of the second image, is not disclosed or made obvious by the prior art of record.

Regarding Claim 8, the invention as claimed, specifically in combination with the means for selecting the light comprise a mask composed of transparent or reflective microprisms which make it possible to send in a first direction the light coming from the illumination points and constituting a first beam and to send in a second direction the light coming from the set of bands and constituting a second beam, the device comprises a means for forming the first image from the first beam, the device comprises a means for forming the second image from the second beam, is not disclosed or made obvious by the prior art of record.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cofer et al. US 6,841,780 and Stafsudd et al. US 2002/0176605 teach similar image combination systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN YAM whose telephone number is (571)272-2449. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571)272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen Yam/
Primary Examiner, Art Unit 2878